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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,588	10/31/2003	Ezio Valdevit	112-0124US	1886

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EXAMINER	
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ART UNIT	**PAPER NUMBER**
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/699,588	VALDEVIT, EZIO	
	Examiner	Art Unit	
	Mohammad S. Adhami	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-82* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-82* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: On Pg.1, the serial number of the related application is missing.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 73-82 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 73-82 are drawn to a signal; a "signal" is ineligible for patent protection because it does not fall within any of the four statutory classes of 35 USC 101 ("process, machine, manufacture or composition of matter"); it is not patentable subject matter. Reference The "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_20051026.pdf) (see ANNEX IV, (c) Electro-Magnetic Signals on page 55).

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 6,7,14,24,25,32,42,43,50,60,61,78,79, and 81 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 6,7,24,25,42,43,60,61,78 and 79 "words" appears out of context and has not been previously mentioned.

In claims 14,32,50,68 and 81, "the true destination address" appears out of context. What is the "true destination address"?

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-82 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-72 of

copending Application No. 10/699,603. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1-72 merely broaden the scope of claims 1-72 respectively, of the copending application. It is well settled that broadening the scope of claims would have been obvious to one of ordinary skill in the art in view of the narrower issued claims. In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982) and In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

7. Claims 73-82 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-7,12,14, and 16 of copending Application No. 10/669,603. Although the conflicting claims are not identical, they are not patentably distinct from each other because the only difference is the fact that the claims of the copending application are narrower and are part of a switch. However, the Examiner takes official notice that it is well known in the art to use a switch in order to control the flow of data. Furthermore, it is well settled that broadening the scope of claims would have been obvious to one of ordinary skill in the art in view of the narrower issued claims. In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982) and In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1,8-13,18,19,26-31,36,37,44-49,54,55,62-67,72,73, and 80 (as best understood) rejected under 35 U.S.C. 102(b) as being anticipated by Perlman (US 5,844,902).

Re claims 1,19,37,55 and 73:

Perlman discloses *a first and second node device connected to a fabric* (Fig.1 ref.100 and 102 are node devices connected to a fabric).

Perlman further discloses *a first and second switch coupled* (Fig.1 ref.104,106,108,1001,112,114 where the bridges are switches).

Perlman further discloses *a plurality of ports configured to receive and transmit frames* (Fig.1 ref.104,106,108,1001,112,114 where the bridges contain ports that receive and transmit messages).

Perlman further discloses *a fabric manager coupled to the ports to obtain the received frame and provide a frame to be transmitted* (Abstract "Messages received from a first LAN are forwarded to a second LAN" where the bridge contains a fabric manager).

Perlman further discloses the fabric manager configured to add information to the frame, the information including receive and transmit port

identity and switch identity (Col.3 lines 31-33 "a header is attached to the message indicating the address of the source end system and the destination end system" and Col.5 lines 56-64 when a bridge receives an explorer message, the bridge modifies the message by attaching an indication of the LAN number and bridge number through which the message has passed, as well as any other desired information and then forwards the modified version to all connected LANs).

Re claims 8,9,26,27,44,45,62, and 63:

Perlman discloses the fabric manager adding information to the frame when the frame is traveling from the original source to the original destination and from the original destination to the original source (Col.5 lines 56-62 when a bridge receives an explorer message, the bridge modifies the message by attaching an indication of the LAN number and bridge number through which the message has passed, as well as any other desired information).

Re claims 10,28,46 and 64:

Perlman discloses *a node device connected to a port and the fabric manager transmitting the frame to the node device* (Fig.1 ref.100 and 102 are node devices connected to ports and Abstract "Messages received from a first LAN are forwarded to a second LAN" where the bridge contains a fabric manager).

Re claims 11,12,29,30,47,48,65,66, and 80:

Perlman discloses *the fabric manager selecting a port to transmit the frame based on source routing information contained in the frame* (Col.3 lines 31-33 "a header is attached to the message indicating the address of the source end system and the destination end system" and Col.3 lines 54-55 "Scheme which use this technique are known as "source routing bridges").

Re claims 13,31,49, and 67:

Perlman discloses *using normal routing rules if the source routing information does not indicate a device directly connected to the switch* (Col.3 lines 38-40 "Each end system on the LAN, upon receiving this message, determines if its address is Y, and if so, the end system reads the message" otherwise the messages is forwarded on as disclosed above using normal routing rules).

Re claims 18,36,54, and 72:

Perlman discloses *determining if a switch is the source of the frame and if so, capturing the frame and not further transmitting it* (Col.3 lines 38-40 "Each end system on the LAN, upon receiving this message, determines if its address is Y, and if so, the end system reads the message" otherwise the messages is forwarded on as disclosed above using normal routing rules where once a message is returned to the source, it is captured by that source and not further transmitted).

10. Claim 2-7,20-25,38-43, 56-61, and 74-79 (as best understood) are rejected under 35 U.S.C. 103(a) as being unpatentable over Perlman in view of Soumiya (US 6,671,257).

Re claims 2-7,20-25,38-43,56-61, and 74-79:

As discussed above, Perlman meets all the limitations of the parent claim.

Perlman further discloses *information including the link cost of a link* (Col.5 lines 40-43 "The explorers may also accumulate other data, such as the maximum packet size along the path followed or the "cost" (expediency) of those paths").

Perlman does not explicitly disclose *the information including transmit and receive rates based on a first defined period and a second defined period that is greater than the first defined period and the number of frames and words transmitted and received.*

Soumiya discloses *the information including transmit and receive rates based on a first defined period and a second defined period that is greater than the first defined period and the number of frames and words transmitted and received* (Fig.26 ref. 8~9 is a rate field, Col.26 lines 21-23 the rate changing unit may change the explicit rate that the rate calculating unit calculates at a predetermined ratio and Col.35 lines 21-36 the prolongment of the observation period means that an interval between ER calculation times becomes longer. The capability for calculating the ER in an observation period which is shorter than a specified observation period and Col.7 lines 27-28 "an arrived cell number

counter for counting a number of arrived cells in correspondence with an output channel" where calculating the transmission rate also contains information about the amount of frames and words transmitted).

Perlman and Soumiya are analogous because they both pertain to network communications.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Perlman to include rate information as taught by Soumiya in order to more efficiently choose a path for transmission and to minimize congestion.

11. Claims 14,16,32,34,50,52,68,70,81, and 82 (as best understood) are rejected under 35 U.S.C. 103(a) as being unpatentable over Perlman in view of Fredericks (US 6,347,334).

Re claims 14,16,32,34,50,52,68,70,81, and 82:

As discussed above, Perlman meets all the limitations of the parent claim.

Perlman does not explicitly disclose *a fibre channel switch, a frame addressed to a well known address, determining the true destination address by retrieving data from the payload, and the frame being an extended link service frame.*

Fredericks discloses *a fibre channel switch, a frame addressed to a well known address, determining the true destination address by retrieving data from the payload, and the frame being an extended link service frame* (Col.1 lines 29-30 "The Fibre channel switch" and Col.6 lines 29-31 "the RNID ELS message is

sent to the Fabric Controller at the address hex "FFFFFD" as is well known" and Table 1 and Col.5 lines 45-46 "The first word in the payload specifies the Command Code").

Perlman and Fredericks are analogous because they both pertain to network communications.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Perlman to include a fibre channel switch and ELS message as taught by Fredericks in order to use a standard network setup and standard and well-known messaging.

12. Claims 15,33,51, and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perlman in view of Lee (US App. 2003/0099194).

Re claims 15,33,51, and 69:

As discussed above, Perlman meets all the limitations of the parent claim.

Perlman does not explicitly disclose *transmitting frames over a plurality of equal cost routes.*

Lee discloses *transmitting frames over a plurality of equal cost routes* (Para.[0005] "partially use a number of shortest paths having the same cost, that is, an equal cost multipath").

Perlman and Lee are analogous because they both pertain to network communications.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Perlman to transmit data over equal routes as taught by Lee in order to balance the load on the paths and reduce congestion.

13. Claims 17,35,53, and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perlman in view of Hongal (US App. 2005/0053006).

Re claims 17,35,53, and 71:

As discussed above, Perlman meets all the limitations of the parent claim.

Perlman does not explicitly disclose *if a switch is the original destination of a frame, then modifying the frame to return it to the original source*.

Hongal discloses *if a switch is the original destination of a frame, then modifying the frame to return it to the original source* (Para.[0030] "The source MAX address is set to the system MAC address of the target network node (i.e. the target MAC address)" and "the destination MAC address in the frame's header could be set to the originator MAC address").

Perlman and Hongal are analogous because they both pertain to network communications.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Perlman to include modifying the frame to return to the original source as taught by Hongal in order to return information about a path to the source and therefore allow the source to choose an optimal path.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wang (US 6,538,997) and Albert (US 6,775,692) show modifying a packet as it traverses a network. Fichou (US 6,687,228) shows modifying transmission rate information and sending a cell backwards. Klotz (US App. 2004/0057389) shows ELS, fibre channel switch, and well known addresses. Wang (US App. 2004/0196787) and Feldman (US 6,055,561) show equal cost multi-path routing.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad S. Adhami whose telephone number is (571)272-8615. The examiner can normally be reached on Monday-Friday 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571)272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MSA 7/17/2007

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